High-performance computer system installed at Los Alamos National Laboratory

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Unclassified ‘Wolf’ system to advance many fields of science

LOS ALAMOS, N.M., June 17, 2014—Los Alamos National Laboratory recently installed a new high-performance computer system, called Wolf, which will be used for unclassified research.

“This machine modernizes our mid-tier resources available to Laboratory scientists,” said Bob Tomlinson, of the Laboratory’s High Performance Computing group. “Wolf is a critical tool that can be used to advance many fields of science.”

Wolf, manufactured by Cray Inc., has 616 compute nodes each with two 8-core 2.6 GHz Intel “Sandybridge” processors, 64 GB of memory and a high speed Infiniband interconnect network. It utilizes the Laboratory’s existing Panasas parallel file system as well as a new one based on Lustre technology.

The Wolf computing system operates at 197 teraflops per second. Collectively, the system has 9,856 compute cores and 19.7 terabytes of memory. It provides users with 86.3 million central processing unit core hours per year. Initial science research projects to utilize Wolf will include climate, materials and astrophysics modeling.

The Laboratory’s Institutional Computing program provides production-computing resources for open and collaborative science at the Laboratory. Institutional Computing provides access to every scientist and engineer at the Laboratory through a competitive, peer-reviewed proposal process. Los Alamos scientists use these systems for fundamental as well as applied research in a wide variety of technical fields.

Los Alamos has, since the advent of computing, been a world leader in high-performance computing and computational science for national security challenges. The Laboratory leads in providing the computing environment, systems, and technologies that support the evolution to exascale-class computing.